

BEFORE THE  
ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C.

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MANAGEMENT OF MINING  
WASTES, DETAILED MANAGEMENT  
PLAN

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June 22, 1987

COMMENTS OF KENNECOTT  
ON  
BEVILL BOUNDARIES ISSUES

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COMMENTS OF KENNECOTT ON BEVILL BOUNDARIES ISSUES

Kennecott operates integrated copper mining, milling, smelting and refining facilities near Salt Lake City, Utah. Kennecott offers the following general comments on Bevill Boundaries issues raised in EPA's Mining Waste Management Plan (June 22, 1987), as well as answers to the specific Bevill Boundaries questions posed in the Plan.

INTRODUCTION AND SUMMARY

In preparing a Report to Congress on mineral processing wastes, EPA must adopt a broad construction of the Bevill Amendment. A broad construction is essential if EPA is to fulfill its statutory mandate to perform a "detailed and com-

prehensive" study of these wastes. It is also necessary to avoid unreasonable disruption of complex and environmentally sound waste and water management practices at integrated mineral mining, milling and processing operations, such as those operated by Kennecott. EPA's study of mineral processing wastes should address solid wastes uniquely associated with primary smelting and refining facilities, including wastes produced by pollution controls employed at such facilities. EPA properly withdrew its 1985 proposal to remove most smelting and refining waste from the Bevill Exclusion.

The courts have recently held that EPA has no authority to regulate as "solid waste" materials that are not discarded but are beneficially reused or recycled. See American Mining Congress v. EPA, D.C. Cir. No. 85-1206 (July 31, 1987). When this principle is applied to Kennecott's copper processing operations, it becomes evident that the only solid wastes generated by Kennecott's smelting and refining facilities are sludge from a water treatment plant and tailings from concentration of reactor slag. These wastes clearly are covered by the Bevill Amendment and should be addressed in EPA's Report to Congress on mineral processing wastes.

- I. EPA'S REPORT TO CONGRESS ON MINERAL PROCESSING WASTE  
MUST ADOPT A BROAD CONSTRUCTION OF THE BEVILL AMENDMENT  
AND SECTION 8002(p)
- A. A Broad Construction Is Required By The Act And Its  
Legislative History

EPA is conducting its study of mineral processing wastes pursuant to Section 8002(p) of the Solid Waste Disposal Act. That section requires a "detailed and comprehensive study . . . of solid waste from the extraction, beneficiation and processing of ores and minerals . . ." Clearly, the study must adopt a broad construction of the subject wastes if it is to be truly "detailed and comprehensive." This point was emphasized during the House debates on the 1980 Amendments that created Section 8002(p) and its companion Section 3001(b)(3)(A)(ii) (the "Bevill Amendment"). Congressman Tom Bevill, the primary sponsor of these statutes, clarified that "it is the sponsor's intention that this list of waste materials in the amendment be read broadly, to incorporate the waste products generated in the real world . . ." 126 Cong. Rec. H1102 (daily ed. Feb. 20, 1980). Following passage of the amendments later that year, Congressman Bevill reiterated this point, with particular emphasis on the importance of a broad construction for purposes of obtaining a thorough study:



"As I stressed on February 20, 1980, in connection with the utility wastes subject to my amendment, '[t]he list of waste materials in the amendment. . . (should) be read broadly, to incorporate the waste products generated in the real world.'

I wish to emphasize that this intention applies equally to all other wastes mentioned in the amendment. For example, all solid wastes which genuinely and legitimately result from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock, and overburden from the mining of uranium ore and cement kiln dust waste are subject to my amendment. The inclusion of all such wastes within the scope of the amendment assures that the health and environmental effects of all wastes generated by the listed operations are fully studied in the detailed and comprehensive manner required. Detailed and comprehensive studies will, in turn, assure that the regulatory decisions made by EPA on the basis of these studies are valid and in the public interest." 126 Cong. Rec. E4957 (daily ed. Nov. 17, 1980) (emphasis added).

When EPA proposed a narrow interpretation of the Bevill Amendment in 1985, Congressman Bevill testified in opposition to EPA's proposal. His testimony repeated many of his original points:

"It is my understanding that EPA has proposed to narrow the scope of the Bevill Amendment to exclude most wastes from smelting and refining of ores and minerals. This proposal is not consistent with congressional intent. During the House debate on my amendment in 1980, I made clear that my amendment should be construed broadly."

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"When we wanted to leave a particular waste out of my amendment, we did so expressly. Such was the case with the uranium mining waste exclusion, which is specifically limited to overburden from uranium mines."

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"My amendment was designed to force EPA to make a thorough study of the economic and environmental consequences of regulating disposal or reuse of mining waste. If no substantial environmental danger was found, no regulation would be permitted. For wastes found to present such a danger, the most cost-effective regulatory approach would be chosen. In this way, we would provide complete environmental protection but would also remove unnecessary roadblocks to development of critical mineral resources. EPA's current proposal prevents achievement of these goals and should therefore be withdrawn." 1/

Former Congressman Jim Santini, another major sponsor of the Bevill Amendment and Section 8002(p), also testified against EPA's 1985 reinterpretation proposal. His testimony urged similar arguments against a narrow interpretation of the wastes subject to these provisions:

"The mine waste exclusion was intended to avoid costly and unnecessary regulation of integrated mining operations and to permit development, if justified, of a regulatory package tailored to the unique characteristics of the mining and mineral processing industry. After a five-year delay, EPA is now proposing to narrow the exclusion apparently because it has not performed the required study of smelting and refining waste. As a result, these wastes will not be studied and integrated mining operations may be subjected to the unnecessary costs of conflicting regulations at a time when such costs could mean the difference between continued operation and economic failure. Nothing could be further from

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1/ Statement of the Honorable Tom Bevill on RCRA Mine Waste Exclusion, pp. 1-2 (November 14, 1985).

congressional intent, and I urge EPA to abandon its current proposal and get on with the business of studying smelter and refinery waste as Congress originally directed." 1/

Congressmen Bevill and Santini recognized that a narrow construction of the wastes subject to the Bevill Amendment and Section 8002(p) would greatly reduce the utility of EPA's study of mineral processing wastes. Time has justified their fears. EPA completed its study of extraction and beneficiation wastes at the end of 1985. That study addressed all mining and milling wastes, leaving only smelting and refining wastes for future study. If EPA interprets mineral "processing" to exclude most of these wastes, the current study will be of very little value, with severe resulting regulatory consequences. As Mr. Santini noted, this is particularly true at integrated mining, milling and processing operations, for reasons to which we now turn.

B. A Broad Construction Is Necessary To Ensure Thorough Study, And Avoid Unreasonable Regulation, Of Complex Waste and Water Management Practices At Integrated Facilities

Kennecott's copper production facilities in Utah are integrated operations where copper ore is mined, milled, smelted and refined to produce a finished and marketable pro-

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1/ Statement of Jim Santini on RCRA Mining Waste Exclusion, p. 3 (November 14, 1985).



duct. Waste and water streams from smelting and refining facilities are intermingled with those from mining and milling operations. For example, slag concentrate tailings go to the tailings pond, which also receives tailings from the main concentrator. Acid plant blowdown water and various other smelter and refinery waters are routed to a treatment plant, after which the treated waters also are placed on the tailings pond. Tailings pond water in turn is recirculated to the concentrators for reuse, and is a significant source of much-needed process water for the concentrators.<sup>1/</sup> Excess water discharged from the tailings pond is subject to an NPDES permit. Another example would be if Kennecott were to pump treatment plant sludge onto the tailings pond to allow the water to separate from the solids. Kennecott is presently studying the viability of such a system, and research and plant data suggest that this would be an environmentally sound disposal practice. Indeed, mixing the sludge with tailings would be consistent with a major goal of the 1984 RCRA Amendments, which was to consolidate waste disposal and minimize use of surface impoundments.

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<sup>1/</sup> Kennecott's concentrators require extremely large volumes of process water, and their metallurgical performance is closely related to water quality. Over the years, Kennecott has made extensive efforts to identify and treat unsuitable (or "adverse") water streams prior to recirculation through the concentrators.

A narrow construction of the wastes subject to Section 8002(p) and the Bevill Amendment would remove much of this complex system from EPA's study. Such a result is surely inconsistent with the congressional directive to conduct a "detailed and comprehensive" study. Moreover, a narrow construction could cause needless disruption of Kennecott's entire waste and water management system. Wastes excluded from EPA's study could become subject to immediate subtitle C regulation. 1/ Hence, Kennecott could be precluded from mixing sludge with tailings under the subtitle C "mixture" and "derived from" rules, because the tailings pond could be deemed a hazardous waste disposal facility subject to subtitle C requirements that could not possibly be met. Similarly, if acid plant blowdown water, which is presently treated and discharged to the tailings pond for collection and recirculation back to the concentrator, is classified as a hazardous waste, both the tailings pond and the concentrators could be deemed hazardous waste facilities. The fact is that wastes and waters from mining, milling, smelting and refining are intermingled at integrated facilities, and that

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1/ These wastes could also be removed from the purview of Section 3004(x), which grants EPA special flexibility in developing any necessary subtitle C regulations for mining and mineral processing wastes. Section 3004(x) applies to the same wastes that are covered by the Bevill Amendment and Section 8002(p).

is why they need to be studied together before regulations are considered.

C. A Broad Construction Would Best Fulfill Congressional Waste Management Policies

A narrow construction of the Bevill Amendment could discourage Kennecott's plans for treatment and disposal of treatment plant sludge, thereby forcing increased reliance on land disposal with the possibility of subsequent corrective action. A similar result would occur if Kennecott is forced to segregate acid plant blowdown or other smelter or refinery waters from the current integrated management system. For these waters, Kennecott would not only be forced to adopt costly alternative treatment and disposal measures, but the substantial benefits of reusing treated waters also would be lost.

The policies underlying the Solid Waste Disposal Act indicate that the Act was intended to discourage such results and to encourage just the sort of waste and water management solutions employed by Kennecott. The dual objectives of the Act "are to promote the protection of health and the environment and to conserve valuable material and energy resources" (Section 1003(a)). This is to be accomplished by, among other things, "minimizing the generation of hazardous waste and the land disposal of hazardous waste by encouraging

process substitution, materials recovery, properly conducted recycling and reuse, and treatment" (Section 1003(a)(6)).

The Act finds that "reliance on land disposal should be minimized or eliminated, and land disposal, particularly landfill and surface impoundments, should be the least favored method for managing hazardous waste" (Section 1002(b)(7)). A related objective is "requiring that hazardous waste be properly managed in the first instance, thereby reducing the need for corrective action at a future date" (Section 1003(a)(5)). The Act recognizes that "if hazardous waste management is improperly performed in the first instance, corrective action is likely to be expensive, complex and time consuming" (Section 1002(b)(6)).

It is also clear that Congress had these policies in mind when it passed the Bevill Amendment and Section 8002(p). For example, Congressman Rahall recognized the potential benefits of waste neutralization through mixing, and cautioned against regulation of this practice prior to study:

"Quite often other materials are mixed with these large volume waste streams, with no environmentally harmful effects, and often with considerable benefit -- as when, for example, boiler cleaning acids are neutralized by being mixed with alkaline fly ash. These appear to me to be environmentally beneficial practices which

EPA should encourage. At the very least, however, the Agency should take no steps to discourage them until it has developed a full factual understanding of the situation." 1/

Rep. Bevill emphasized the potential benefits of recycling and reuse:

"[T]he amendment mandates studies that will encompass not simply waste disposal, but the potential reuses of these byproducts before they become waste materials. Reuse is important for several reasons. There no longer can be any denying of the need for us to conserve our precious natural resources. Indeed, a national commitment to encourage reuse of such materials as fly ash was a key element of RCRA . . . which, unfortunately, seems not to have received adequate attention at EPA" (126 Cong. Rec. H1102).

Rep. Staggers voiced similar concerns:

"One of the principal adverse impacts of this overbroad regulatory program on fossil fuel combustion products would be to severely discourage their reuse. Such a result would run counter to one of the principal designs of the Resource Conservation and Recovery Act -- conservation of valuable material. The 1976 Act sought to stimulate recovery and reuse of discarded materials and thereby lessen our solid waste burden . . . The Act is intended to encourage not discourage such beneficial reuses" (126 Cong. Rec. H1104-05).

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1/ 126 Cong. Rec. H1104 (daily ed. February 20, 1980). All subsequent Congressional Record cites refer to the February 20 daily edition.

Finally, and perhaps most importantly, Congress enacted the Bevill Amendment and Section 8002(p) in an attempt to avoid costly and unnecessary regulation. Rep. Bevill made this clear in introducing his amendment:

"Mr. Chairman, this amendment would require EPA to promptly undertake studies to fill these gaps in the agency's knowledge, and to determine whether there is any health or environmental problem from the disposal of these coal by-product wastes and other materials listed on subparagraph A of the amendment. I am sure that all would agree that it would be unreasonable for EPA to impose costly and burdensome regulatory requirements without knowing if a problem really exists, and if it does, the true scope and nature of that problem" (126 Cong. Rec. H1101).

Mr. Madigan agreed:

"[T]he time has come for the Congress to insist that agencies maximize their resources and focus on the problems that represent the greatest hazard to public welfare. EPA must exercise more common sense and should take into account the economic impact of their actions as compared to the public benefits of a particular proposed regulation or standard" (126 Cong. Rec. H1086-87).

Mr. Traxler also found these considerations paramount:

"[I]t seems to me that the spirit behind [the Bevill] amendment is to address overzealous and perhaps unjustified regulatory action by the Environmental Protection Agency . . .



[F]rom my perspective it appears that EPA may be hastily classifying wastes as hazardous -- and imposing burdensome costs on businesses -- without proper or sufficient data to support their classification . . .

In the final analysis, unnecessary regulations will only add to the already high costs that industry faces from Government regulation, and this cost will ultimately be shared by the American consumer and taxpayer" (126 Cong. Rec. H1087).

Far from portraying a narrow congressional view of the scope of the Bevill Amendment and Section 8002(p), these passages argue for an expansive interpretation under which all wastes generated by mineral processing facilities, and associated management practices, are subjected to thorough study. Kennecott urges EPA to adopt such a construction in the Report to Congress on mineral processing wastes.

II. EPA SHOULD STUDY ALL WASTES UNIQUELY ASSOCIATED WITH SMELTING AND REFINING FACILITIES, INCLUDING WASTES FROM POLLUTION CONTROLS

A. As Used In The Bevill Amendment And Section 8002(p), Mineral "Processing" Means Smelting and Refining

Section 8002(p) and the Bevill Amendment apply to "solid waste from the extraction, beneficiation and processing" of ores and minerals. Shortly after these statutes were enacted,

EPA interpreted them "to include solid waste from the exploration, mining, milling, smelting and refining of ores and minerals." 45 Fed. Reg. 76619 (Nov. 19, 1980). The agency went on to explain that this interpretation would cover all wastes "uniquely associated with these mining and allied processing operations" (id.).

Kennecott supports this longstanding EPA interpretation of these statutes. By their own terms, the statutes cover all ore and mineral "processing" wastes. Within the mining industry, the generally accepted meaning of "processing" includes smelting and refining operations. For example, "processing" is defined by the Bureau of Mines as "the methods employed to clean, process and prepare coal and metallic ores into the final marketable product" (Mining, Minerals and Related Terms, 1968 ed.). The Department of Interior refers to the "mineral processing industries" as including smelting and refining (Mining and Minerals Policy (1975), p. 6). The Engineering and Mining Journal includes smelting and refining under "mineral processing operations" (International Directory of Mining and Mineral Processing Operations, 1980 ed.). The Society of Mining Engineers covers smelting and refining in its discussion of "mineral processing" (Mining Engineering Handbook, 1976 ed.). Even EPA's contractors have characterized smelting and refining as "processing." See PEI Associates, Overview of

Solid Waste, General Management and Chemical Characteristics for the Primary Smelting and Refining Industries, pp. 3-4, 6-1 (December 1984); ICF, Inc., Hazardous Waste Management Costs in Selected Primary Smelting and Refining Industries, p. 4-1 (September 1985).

The Supreme Court has held that when such technical terms are used in a statute, they are presumed to have their technical meaning. See Corning Glass Works v. Brennan, 417 U.S. 188, 201-02 (1974). In this case, EPA has also heard testimony that Congress intended to incorporate this technical meaning into the Bevill Amendment and Section 8002(p). Former Rep. Jim Santini, a primary sponsor of these statutes, made this clear in his testimony opposing EPA's 1985 proposal to narrow the Bevill exclusion:

"The mine waste exclusion covers waste from 'extraction, beneficiation and processing' of ores and minerals. The term 'processing' was used for the precise purpose of making sure that all wastes from smelters and refineries would be covered by the exclusion. We were assured that under the standard industry jargon, 'extraction' meant mining and exploration, 'beneficiation' meant milling and intermediate activities and 'processing' meant smelting, refining and similar activities designed to achieve a marketable end product. This understanding also led us to adopt a new study provision in Section 8002(p), which was intended to make sure that EPA would study all smelting and refining wastes." 1/

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1/ Statement of Jim Santini on RCRA Mining Waste Exclusion, pp. 1-2 (November 14, 1985) (emphasis in original).

Hence, EPA's study should include all solid wastes uniquely associated with primary smelting and refining operations.

B. Section 8002(p) And The Bevill Amendment Apply To Wastes Generated By Pollution Controls

Clean Air Act regulations require Kennecott's smelter to employ various types of pollution control equipment to reduce ambient emissions of particulate matter and sulfur dioxide. Effluent limitations contained in an NPDES permit, and the water supply needs of Kennecott's concentrators, require Kennecott to treat various smelter and refinery water streams in a water treatment plant. These control devices produce two resulting streams. Blowdown water from Kennecott's sulfuric acid plants is mixed with other waters, routed through the treatment plant and recirculated through the concentrators. Sludge from the treatment plant currently is disposed in surface impoundments, but Kennecott is studying plans for treatment of the sludge in the tailings pond.

Kennecott's smelter and refinery would not be permitted to operate without the pollution controls that produce these streams. As explained above, the treatment plant also is a significant source of process water for Kennecott's concentrators, and is necessary to ensure concentrator water quality. Moreover, acid plant blowdown water, which is itself a product of pollution controls, is one of the waters routed through

the treatment plant. Hence, these streams are "uniquely associated" with Kennecott's operations through both the manner in which they are generated and the manner in which they are reused. A study that excludes them would ignore major aspects of Kennecott's integrated waste and water management system. Additionally, as explained above (pp. 6-9), these streams are mixed with others in Kennecott's system, and cannot be segregated easily. If they are removed from the Bevill exclusion, the regulatory consequences would be severe and contrary to congressional waste management policies.

Apart from these points, it is clear that Congress intended to cover pollution control wastes in the Bevill Amendment and Section 8002(p). Both statutes apply to "solid waste" from extraction, beneficiation and processing of ores and minerals. In turn, Section 1004(27) of the Act defines "solid waste" to include "sludge from a waste treatment plant, water supply treatment plant or air pollution control facility and other discarded material." Indeed, a primary purpose of the Act is to ensure proper disposal of pollution control wastes. Section 1002(b)(3) of the Act states the congressional finding that "as a result of the Clean Air Act, the Water Pollution Control Act, and other federal and state laws respecting public health

and the environment, greater amounts of solid waste (in the form of sludge and other pollution control residues) have been created" (emphasis added).

As this congressional finding suggests, the Act's definition of "solid waste" was intended to cover not only "sludge" from pollution controls, but other pollution control wastes as well. This is clarified by the recent opinion in AMC v. EPA, D.C. Cir. No. 85-1206 (July 31, 1987). In interpreting the definition, the court stated:

"[T]he definition here is carefully crafted with specificity. It contains three specific terms and then sets forth the broader term 'other discarded material'. . . . Hence, the three particular classes - garbage, refuse and sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility - contain materials that clearly fit within the ordinary, everyday sense of 'discarded.' It is most sensible to conclude that Congress, in adding the concluding phrase 'other discarded material,' meant to grant EPA authority over similar types of waste. . . ." (slip op. at 26-27, emphasis added). 1/

Inclusion of pollution control wastes within the scope of the Bevill Amendment and Section 8002(p) is required by law and logic alike. Kennecott urges the agency to interpret these statutes accordingly.

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1/ The court went on to note that this authority was not meant to "open up the federal regulatory reach of [sic] an entirely new category of materials, i.e., materials neither disposed of nor abandoned (slip op. at 27).



C. EPA Properly Withdrew Its 1985 Proposal To Narrow The Scope Of The Bevill Amendment And Section 8002(p)

In 1985, EPA proposed to remove most smelting and refining wastes from the Bevill exclusion and, consequently, from the study required by Section 8002(p). Kennecott opposed this proposal for the reasons detailed in Kennecott's comments on the Mining Waste Exclusion (filed January 2, 1986). EPA's proposal eventually was withdrawn because it proved unworkable, and that is reason enough not to resurrect it. See 51 Fed. Reg. 36233 (October 9, 1986). However, the court's opinion in AMC v. EPA, D.C. Cir. No. 85-1206 (July 31, 1987) offers additional grounds for rejection. Kennecott's comments on the Mining Waste Exclusion pointed out that EPA's proposed reinterpretation was an unwarranted departure from the plain language of the Bevill Amendment based on a few vague passages of legislative history. In the AMC case, EPA had taken the same tack in interpreting the Act's definition of "solid waste." The court refused to permit such tactics, stating:

"Legislative history can be a legitimate guide to a statutory purpose obscured by ambiguity, but 'in the absence of a clearly expressed legislative intention to the contrary, the language of the statute itself must ordinarily be regarded as conclusive.'"

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"Passing references and isolated phrases are not controlling when analyzing a legislative history. Indeed, the [Supreme] Court recently reiterated that, where the language of the statute appears to settle the question, courts should 'look to the legislative history to determine only whether there is clearly expressed legislative intention contrary to that language, which would require [the court] to question the strong presumption that Congress expresses its intent through the language it chooses'" (slip op. at 28, 31 n. 22, citations omitted).

The AMC opinion is a clear indication that the federal courts will not tolerate unreasonable departures from the plain meaning of the Act. 1/ Kennecott urges EPA to retain its long-standing interpretation of the Bevill Amendment and Section 8002(p) to cover all wastes uniquely associated with primary smelting and refining facilities, including wastes generated by pollution controls.

### III. MATERIALS DESTINED FOR BENEFICIAL RECYCLING OR REUSE CANNOT BE REGULATED AS WASTES

On July 31 Kennecott submitted to EPA a comprehensive report on wastes and secondary materials produced by our copper smelting and refining facilities. The report points out that the vast majority of these materials are beneficially reused

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1/ This is particularly true where, as here, the agency would be reversing a contemporaneous and longstanding interpretation of the statute. See, e.g., Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Life Ins. Co., 463 U.S. 29, 42 (1983).

or are recycled to recover valuable products. In AMC v. EPA, D. C. Cir. No. 85- 1206 (July 31, 1987) the court held that these materials cannot be regulated as wastes under the Solid Waste Disposal Act. The court began its analysis by targeting primary metals production as an industry that produces a particularly wide array of valuable secondary materials:

"Mining. In the mining industry, primary metals production involves the extraction of fractions of a percent of a metal from a complex mineralogical matrix (i.e., the natural material in which minerals are embedded). Extractive metallurgy proceeds incrementally. Rome was not built in a day, and all metal cannot be extracted in one fell swoop. In consequence, materials are reprocessed in order to remove as much of the pure metal as possible from the natural ore. . . What is more, valuable metal-bearing and mineral-bearing dusts are often released in processing a particular metal. The mining facility typically recaptures, recycles, and reuses these dusts, frequently in production processes different from the one from which the dusts were originally emitted (slip op. at 9, emphasis in original).

The court then concluded that such materials are not covered by the Act's definition of "solid waste," and therefore cannot be regulated as such:

"RCRA was enacted, as the Congressional objectives and findings make clear, in an effort to help States deal with the ever-increasing problem of solid waste disposal by encouraging the search for and use of alternatives to existing methods of disposal (including recycling) and protecting health and the environment by regulating hazardous wastes. To fulfill these purposes, it seems clear that EPA need not regulate

"spent" materials that are recycled and reused in an ongoing manufacturing or industrial process. These materials have not yet become part of the waste disposal problem; rather, they are destined for beneficial reuse or recycling in a continuous process by the generating industry itself."

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"We are constrained to conclude that, in light of the language and structure of RCRA, the problems animating Congress to enact it, and the relevant portions of the legislative history, Congress clearly and unambiguously expressed its intent that 'solid waste' (and therefore EPA's regulatory authority) be limited to materials that are 'discarded' by virtue of being disposed of, abandoned, or thrown away. While we do not lightly overturn an agency's reading of its own statute, we are persuaded that by regulating in-process secondary materials, EPA has acted in contravention of Congress' intent (slip op. at 18, 34-35, emphasis in original, footnotes omitted).

Accordingly, EPA has no authority under the Solid Waste Disposal Act to regulate materials produced by Kennecott's operations that are not discarded but are beneficially reused or are recycled to recover valuable products. The detailed discussion of these materials, presented below (pp. 23-25), demonstrates that the only solid wastes currently generated at Kennecott's smelting and refining facilities are treatment plant sludge and tailings from concentration of reactor slag.

IV. RESPONSE TO SPECIFIC QUESTIONS POSED IN EPA'S MINING WASTE MANAGEMENT PLAN

Kennecott offers the following responses to the "Bevill Boundaries" questions posed on pages 4-49-50 of the Mining Waste Management Plan.

1. Should excluded wastes be limited to wastes from only those operations that directly process ores and minerals, or should processing wastes also be from auxiliary operations excluded from regulation under subtitle C?

As explained above (pp. 13-16), the term "processing," as used in the Bevill Amendment, is generally understood to include smelting, refining, and other activities designed to achieve a similar marketable product. The previous discussion (pp. 3-13) also demonstrated that Congress intended the Bevill Amendment to be "read broadly to incorporate the waste products generated in the real world." 123 Cong. Rec. H1102 (daily ed. February 20, 1980) (remarks of Rep. Bevill). The amendment should therefore be construed to cover all wastes from smelting, refining and associated auxiliary operations.

2. What wastes are uniquely associated with the extraction, beneficiation and processing of ores and minerals?

All wastes addressed in EPA's 1985 Report to Congress on mining wastes, and subject to the agency's subsequent regulatory determination, fall within this category. This includes wastes

from pollution controls associated with extraction and beneficiation operations.

With respect to processing wastes, on July 31 Kennecott submitted to EPA a report in response to the agency's request for review of data relative to process and waste streams at mineral processing facilities. The report identifies the following waste streams that Kennecott considers to be "uniquely associated" with copper processing operations:

- Tailings from concentration of  
reactor slag
- Sludge from treatment of adverse smelter  
and refinery waters

Kennecott's report documents that adverse smelter and refinery waters are beneficially reused at Kennecott's integrated operations, and therefore do not qualify for regulation as "solid waste." Acid plant blowdown, refinery bleed electrolyte and other smelter and refinery adverse waters are routed to a central water treatment plant, after which the treated water is first pumped to the tailings pond and then recirculated to the concentrators. This treated water is a significant source of clean process water, which is always in demand at Kennecott's facilities. Sludge from the water treatment plant currently is discarded in surface impoundments. Reactor slag is processed in a concentrator, after which approximately 17% of the slag returns to the smelter as concentrate. The rest is discarded as slag concentrator tailings. These



tailings and treatment plant sludge are the only solid wastes generated by Kennecott's copper smelting and refining facilities. As demonstrated above (pp. 13-20), these wastes clearly are covered by the Bevill Amendment and Section 8002(p).

Kennecott's report also addresses a number of secondary materials for which EPA had requested data review. In Kennecott's view, these materials also are "uniquely associated" with copper processing operations. However, as detailed in our report, Kennecott rejects characterization of these materials as "wastes" because they have a high copper or precious metals content and are processed in Kennecott's smelter to recover these valuable products. Materials in this category include: anode furnace flue dust, refinery baghouse dust, smelter flue dusts, converter slag, refinery slimes, arsenical cathodes, foul cathodes, cathode preparation plant E.P. sludge, Dore slag, furnace brick, various scrap metal sweepings and screenings, boiler and cyclone dusts and anode furnace slag. Spent vanadium pentoxide catalyst also should be included here. Although it contains no valuable metals, it is returned to the smelter as a substitute for silica flux.

3. At what point does further processing of a mineral product remove the resulting wastes from the mining waste exemption?

As explained above and in our comments on the Mining Waste Exclusion, Kennecott considers all wastes from copper smelting and refining facilities, and associated auxiliary operations, to be covered by the exclusion.

4. Are residuals of Bevill waste processing likewise Bevill wastes?

Such residuals are Bevill wastes if they result from processing of Bevill wastes for their mineral content. For example, under the right operating configuration it may be possible to process either or both of Kennecott's Bevill wastes - treatment plant sludge and slag concentrator tailings - to recover copper and/or precious metals. Any wastes produced by such operations would be uniquely associated with "extraction, beneficiation and processing of ores and minerals," and would therefore be covered by the Bevill Amendment.

5. What is the status of wastes derived from processes utilizing both primary and secondary feedstocks?

In Kennecott's view, such wastes are covered by the Mining Waste Exclusion, at least where the secondary feedstocks are materials produced by primary mineral extraction, beneficiation or processing operations. The Bevill Amendment applies

to all processing of "ores and minerals", and the vast majority of our secondary feedstocks are processed for their mineral content.<sup>1/</sup> Limiting the exclusion to primary operations where all or a substantial portion of the feedstocks are primary materials could severely limit beneficial processing of secondary materials, for no apparent reason. For example, Kennecott's report on smelter and refinery wastes explains that most secondary materials are produced and reprocessed in batches, and it is frequently not possible to maintain a continuous, uniform reprocessing rate. Further, it would be virtually impossible at Kennecott's facilities to segregate wastes from primary and secondary feedstocks because the wastes are the same. As explained in Kennecott's report, our secondary feedstocks are processed in the smelter with primary feedstocks and produce the same wastes as smelting of primary feedstocks.

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<sup>1/</sup> At Kennecott's processing facilities, the only secondary feedstock not processed for mineral recovery is spent vanadium pentoxide catalyst. Addition of spent vanadium pentoxide to the feed should not change the status of the resulting wastes because it is only used in extremely small quantities and is charged directly to the smelter as a substitute for silica flux, which is an essential ingredient in the copper smelting process.

6. What effect does the use of hazardous waste as a fuel have on the Bevill status of process residues?

In Kennecott's view, the use of hazardous waste as a fuel has no effect on the status of wastes otherwise covered by the Bevill Amendment.

7. Are wastes produced by alloying, fabrication or other manufacturing operations excluded by the Bevill Amendment?

No comment.

8. Are wastes derived from the operation of pollution control equipment excluded from regulation under subtitle C?

For the reasons stated above (pp. 16-19), Kennecott believes that pollution control wastes, such as treatment plant sludge, are excluded from subtitle C regulation by the Bevill Amendment.

9. Does a waste which would normally be excluded lose that exclusion if it derives from a process off-site from the principal processing operation? And secondly, do otherwise excluded wastes derived from the refining of intermediate products lose their status if those intermediate products have been sold to another party for refining?

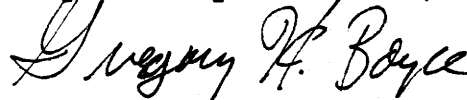
Neither the Bevill Amendment nor its legislative history suggests that mineral processing wastes may lose the exclusion simply because they come from different processing sites. One problem with removing such wastes from Bevill coverage is the difficulty of defining the "site," particularly at integrated facilities such as those operated by Kennecott.

Further, as previously stated, the amendment should be interpreted broadly to ensure that all mineral processing wastes and associated management practices are subjected to thorough study. These wastes should be included in EPA's study to determine whether they present any peculiar problems that deserve special regulatory treatment.

#### CONCLUSION

In preparing a Report to Congress on mineral processing wastes, EPA must adopt a broad construction of the Bevill Amendment and Section 8002(p). The study should address all wastes uniquely associated with smelting and refining operations. The only "solid wastes" generated by Kennecott's copper smelting and refining facilities are tailings from concentration of reactor slag and sludge from a central water treatment plant. These wastes clearly are covered by the Bevill Amendment and Section 8002(p), and should be addressed in EPA's study.

Respectfully submitted,



Gregory H. Boyce  
Director, Environmental  
Affairs  
Kennecott  
9600 W 21st South  
Magna, Utah 84044  
(801) 569-6550